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lucid object in the epithelium-cell, is a cytoblast. He suggests, that the cells into which, according to his observations, the nucleus becomes resolved, may enter into the formation of secondary deposits—for instance, spiral fibres; and that they may contribute to the thickening which takes place, in some instances, in the cell-membrane.

The germ of certain plants passes through states so much resembling those occurring in the germ of mammiferous animals, that it is not easy to consider them as resulting either from a different fundamental form, or from a process of development which even in its details is not the same as what has been above described; the fundamental form in question in Mammalia—and therefore it may be presumed of Man himself—being that which is permanent in the simplest plants,—the single isolated cell.

A paper was also read, entitled “On the Odour accompanying Electricity, and on the probability of its dependence on the presence of a new substance;” by C. F. Schœnbein, Professor of Chemistry, Bâle, communicated in a letter to Michael Faraday, Esq., D.C.L., F.R.S., &c.

The author's attention having been long directed to the remarkable fact, that odour, resembling that of phosphorus, is given off during the escape of positive electricity from the point of a conductor into air; and is likewise perceptible when lightning has struck any object, and also when water is electrolyzed, he has investigated the circumstances attending these phenomena; and the results he has obtained will, he expects, afford a clue to the discovery of their cause.

The odour which accompanies the electrolyzation of water, he observes, is only disengaged at the positive electrode. He also finds that the odoriferous principle can be preserved in well-closed glass bottles for any length of time. The only metals which yield this odour are gold and platina; but dilute sulphuric, phosphoric, and nitric acids, and from aqueous solutions of several of the salts, also disengage it. Raising the temperature of the fluid to the boiling point prevents the odour from arising; and the addition of comparatively small quantities of powdered charcoal, iron, zinc, tin, lead, antimony, bismuth or arsenic, or of a few drops of mercury, to the odorous principle contained in a bottle, immediately destroys the smell; and the same happens when platina or gold, heated red hot, is introduced into the vessel containing that volatile substance.

May 14, 1840.

MAJOR EDWARD SABINE, R.A. V.P., in the Chair.

A paper was read, entitled, “Tables of the Variation, through a cycle of nine years, of the mean height of the Barometer, mean Temperature, and depth of Rain, as connected with the prevailing

Winds, influenced in their direction by the occurrence of the Lunar Apsides, with some concluding observations on the result." By Luke Howard, Esq., F.R.S., &c.

From the Tables here given, the author draws the following conclusions :—

1. The barometer is higher under the lunar apogee, than under the perigee; the mean height in the former case being 29·84517, and in the latter, 29·75542.

2. The mean temperature is lower under the apogee than under the perigee; that of the former being $48^{\circ}7126$, and of the latter, $49^{\circ}0356$. The mean of the whole year was $48^{\circ}7126$.

3. The rain of the weeks following the apsis exceeds that under the perigee; but with two striking exceptions in the annual result of nine years, the one in the wettest, and the other in the driest year of the cycle.

With regard to the winds, the author remarks that those from the north, north-east, and east, prevailed under the apogee on 38 days, under the perigee on 21 days; and those from the south, south-west, and west, prevailed under the apogee on 20 days, under the perigee on 38 days.

It appears, therefore, that in the climate of London, the moon in her perigee brings over us the southern atmosphere, which tends to lower the density and raise the temperature of the air, occasioning also a larger precipitation of rain. In the apogee, on the contrary, there is a freer influx of air from the northward, a higher barometer, a lower temperature, and less rain; subject, however, to a large addition of rain under this apsis twice in a cycle of nine years, at the times when also the extremes of wet and dry take place on the whole amount of the year.

A paper was also read entitled, "Experimental Researches into the strength of Pillars of Cast Iron, and other materials." By Eaton Hodgkinson, Esq. Communicated by Peter Barlow, Esq., F.R.S., &c.

The author finds that in all long pillars of the same dimensions, the resistance to crushing by flexure is about three times greater when the ends of the pillars are flat, than when they are rounded. A long uniform cast-iron pillar, with its ends firmly fixed, whether by means of disks or otherwise, has the same power to resist breaking as a pillar of the same diameter, and half the length, with the ends rounded, or turned so that the force would pass through the axis. The strength of a pillar with one end round and the other flat, is the arithmetical mean between that of a pillar of the same dimensions with both ends round, and one with both ends flat. Some additional strength is given to a pillar by enlarging its diameter in the middle part.

The author next investigated the strength of long cast-iron